

United States Army Logistics Transformation Agency



Common Logistics Operating Environment (CLOE)

General Officers Steering Committee Decision Brief

29 Sep 2003

**Materiel Logistics Division
Logistics Transformation
Agency
(717) 770-7600**



Purpose

- **Obtain Approval of:**
 - **CLOE Implementation Strategy**
 - **CLOE MDEP**
 - **CLOE Governance Structure**

- **To Get There:**
 - **Execution to Date**
 - **Policy**
 - **Implementation Going Forward**
 - **Systems Integration Lab**
 - **Funding Requirements**
 - **Governance Structure**
 - **Recommendations**



Execution to Date

■ **Program Management**

- **Established CLOE Program Army-wide**
- **Established Synchronization IPT**
- **Developed CLOE Implementation Strategy**

■ **Technical Work**

- **Published CBM+ and Predictive Maintenance Operational Concept**
- **Finalized CLOE V1.0 Operational and Systems Architecture**
- **Built SBCT Concept of Operations**
 - **Sustainment Architecture Via Current STAMISs**
 - **Embedded Platform Enablers**
- **Preliminary Planning for CLOE Experiment**

■ **Policy**

- **CLOE Strategy Paper Developed/Approved**
- **CLOE Campaign Plan**
- **Army Asst Sec of Acquisition Policy Memo**

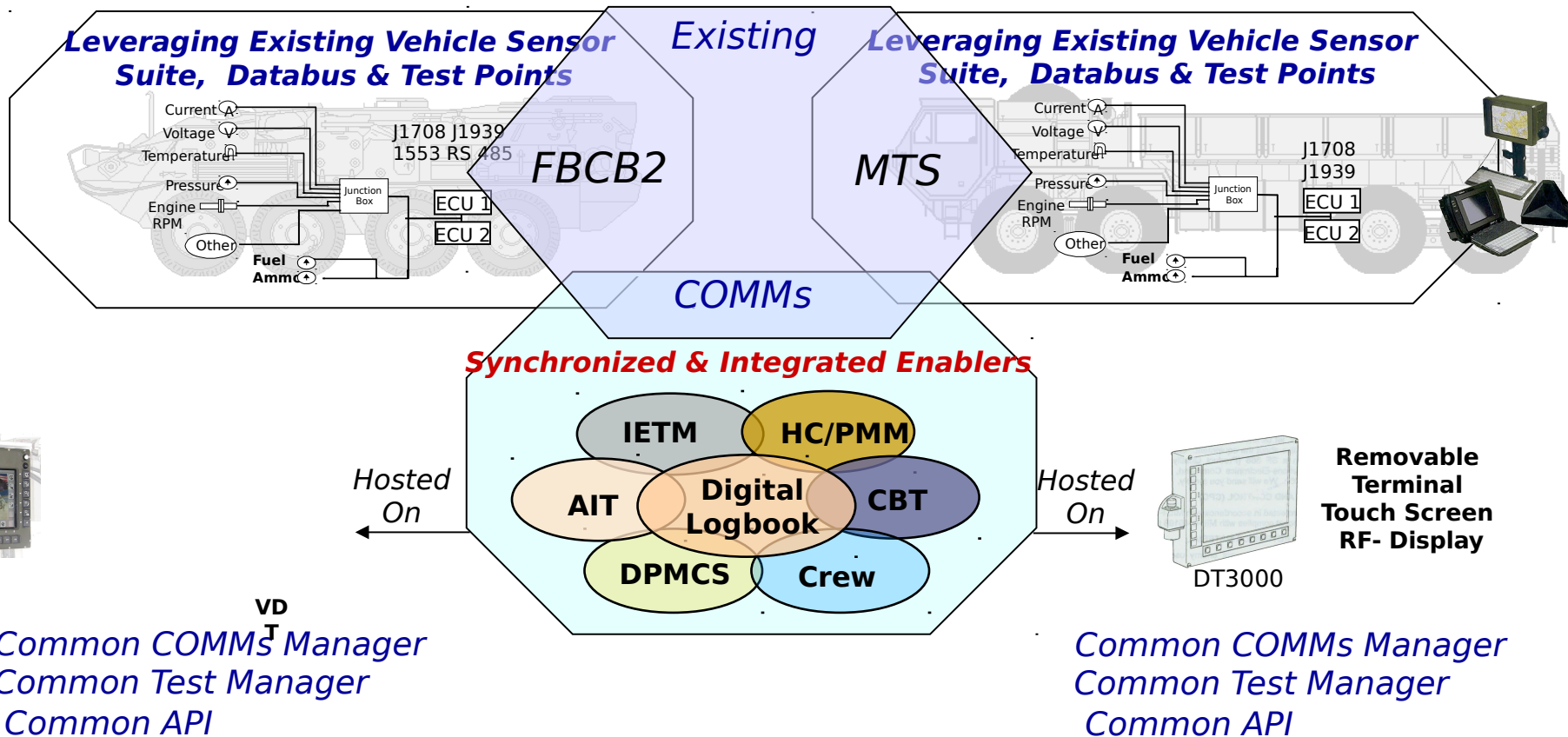


CLOE Version 1.0 – SBCT Proof Of Enablers Demonstration

Self-Reporting Platforms, Equipment Health Management & Condition-Based Maintenance

Stryker Force

Current Force



Sustaining The Transforming Army... Transforming the Sustaining Army



CLOE Policy Memorandum

- CLOE Capabilities and Standards Policy Memo signed 25 Jul 03 by Assistant Secretary of the Army (ALT) - **"The Army will employ a CLOE to capture, store, retrieve, and utilize logistics data from battlefield operating systems"**
- Policy states:
 - G-4, as the Responsible Official for Sustainment to **lead, coordinate, and implement** the CLOE
 - TRADOC must consider CLOE **common data standards, specifications, and protocols** for sensor-based, self-monitoring, self-reporting platforms and equipment when writing and updating operational capability documents for OF units.
 - Program Executives and Managers use CLOE-designated **common data standards, specifications and protocols** when acquiring critical information technologies
 - Program Executives and Managers **acquire access to platform/equipment technical data** for all ACAT I, II, and III systems
 - Program Managers and Managers and AMC MSCs will **make technical data available** to acquisition and sustainment communities using commercial PDM systems

LTA has been assigned as the Executive Agent for CLOE



CLOE Policy Elements

- **Directs the Army to Employ a Common Logistics Operating Environment (CLOE)**
 - **Requirements**
 - Define Requirements for Sensor-based, **Self-monitoring, Self-reporting** Platforms Requirements
 - Assure **Commonality & Interoperability** in Support of OF Sustainment
 - **Processes**
 - Employ an **On-Board Health Management System** Process
 - Build Tactical Platform Level **Logistics Business Processes**
 - Link Platform Health Monitoring Capabilities to **EI Processes**
 - **Standards, Specs, Protocols**
 - Provide Guidance and **Configuration Management** for PEOs/PMs
 - **Data Management**
 - Provide **Platform Technical Data** to Acquisition and Sustainment Communities
 - Capture, Store, Retrieve, and Utilize **Logistics Data** From Battlefield Operating Systems



CLOE Actions To Support Policy Elements

Requirements

- Platform Systems Engineering
- Synchronizing Platform Enablers
- Test on Actual Vehicles

Processes

- Modeling and Simulation
- CLOE's Phased Operational and Systems Architecture Development
- Business Process Baseline for Army Tactical Maintenance

Standards

- Configuration Management
- Specifications, Standards and Protocols

Data

- Platform Data Requirements for
 - Enterprise Integration
 - PMs
 - C2
- Enhanced Decision Support Tools
 - Commander
 - S-4
 - CRT

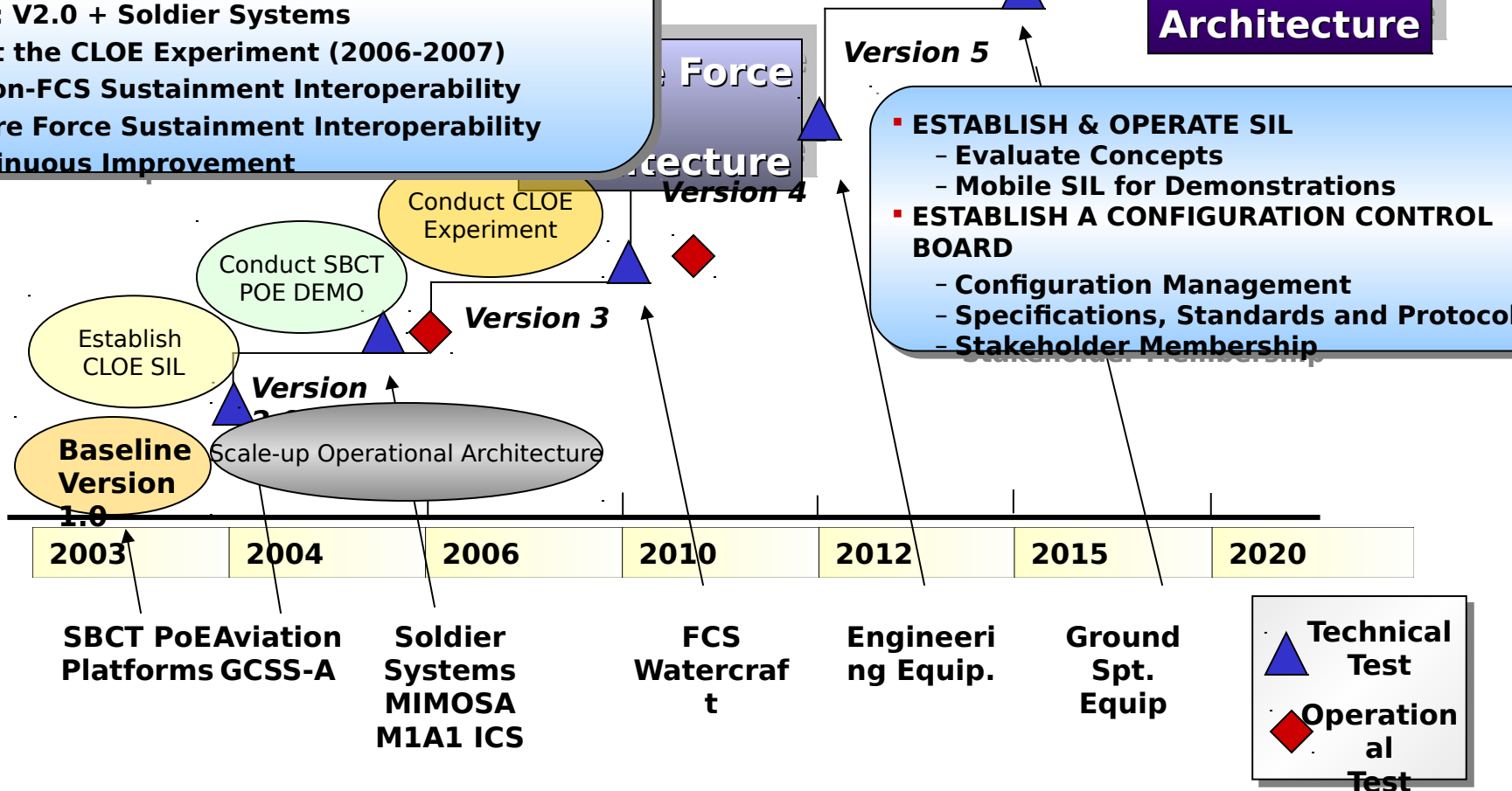


CLOE Implementation

Moving Forward to the Future Force

- Conduct The SBCT POE Technical Test
- Scale-up The Operational Architecture (2003-2006)
 - V2.0: Ground + Aviation + GCSS-A
 - V3.0: V2.0 + Soldier Systems
- Conduct the CLOE Experiment (2006-2007)
- FCS / Non-FCS Sustainment Interoperability
 - Future Force Sustainment Interoperability
 - Continuous Improvement

**Refined
Future Force
Architecture**

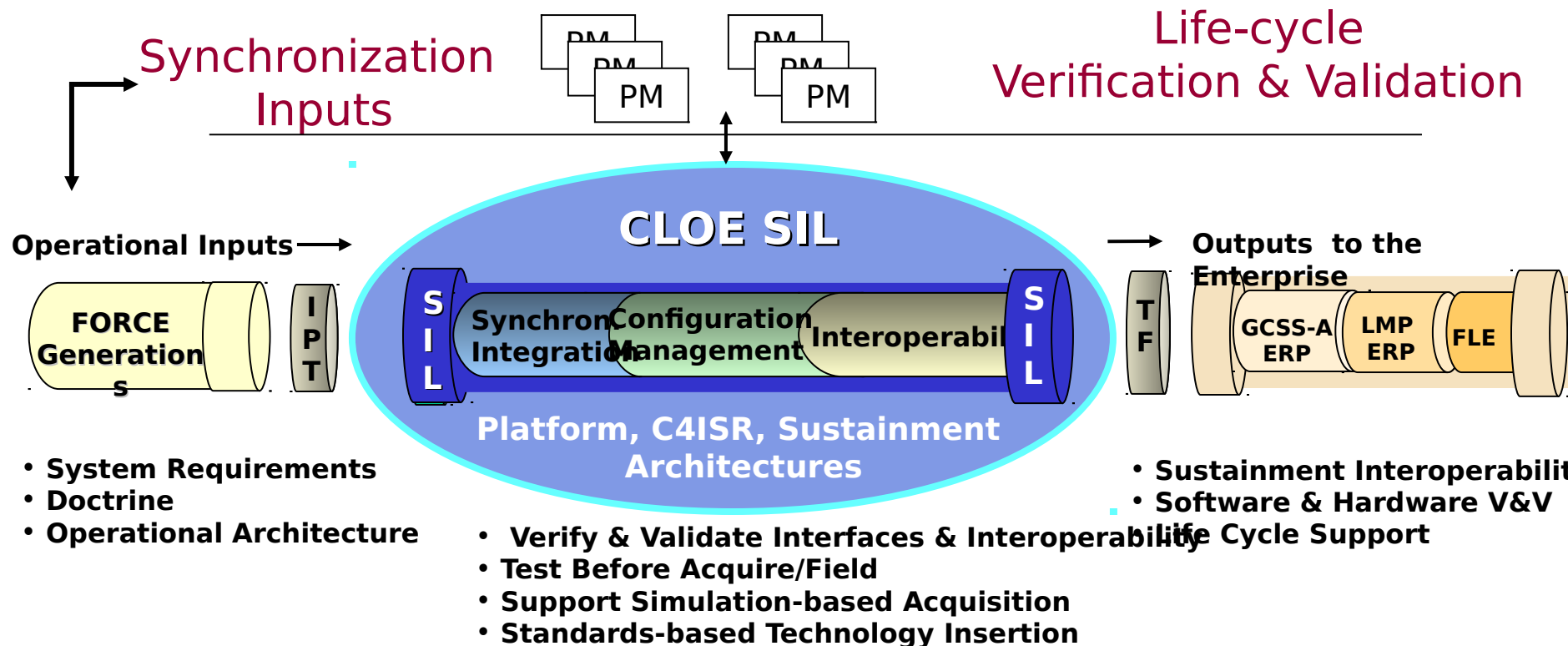


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CLOE Systems Integration Lab

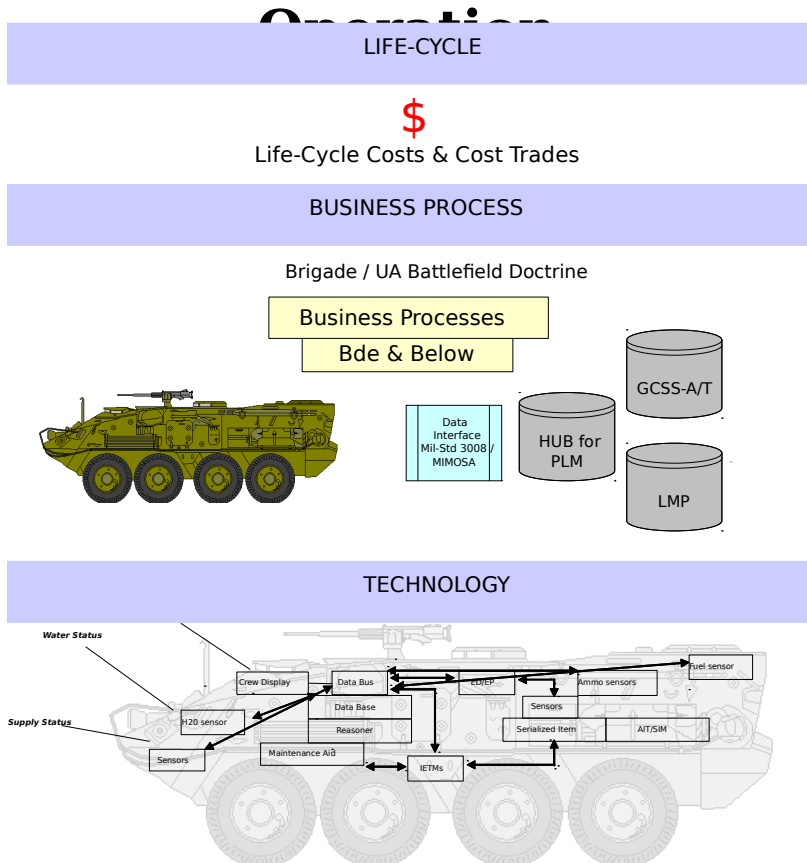
The CLOE SIL Operates as a Meta-Laboratory, Ensuring Interoperability Across All Equipment Force Generations





SIL Support to PM's

Levels of CLOE SIL



■ System Life-cycle:

- **Test Proposed Hardware & Software On Multiple Levels:**
 - Impact Of Tech Trades On Life-cycle Costs
 - **ACQ / RECAP / SLEP Decision Support**
- **Provide Input to POM**

■ Business Process:

- **Ensure Business Process & Doctrine Compatibility for Tactical Maintenance On the Future Force Battlefield**
- **Ensure Platform Systems Interoperate Across PEO Domains**
 - e.g. C3, EIS, Aviation, Ground

■ Technology:

- **Identify Platform Data To The Logistics Enterprise**
- **Recommend Standards, Specs, and Technology Solutions To PMs**

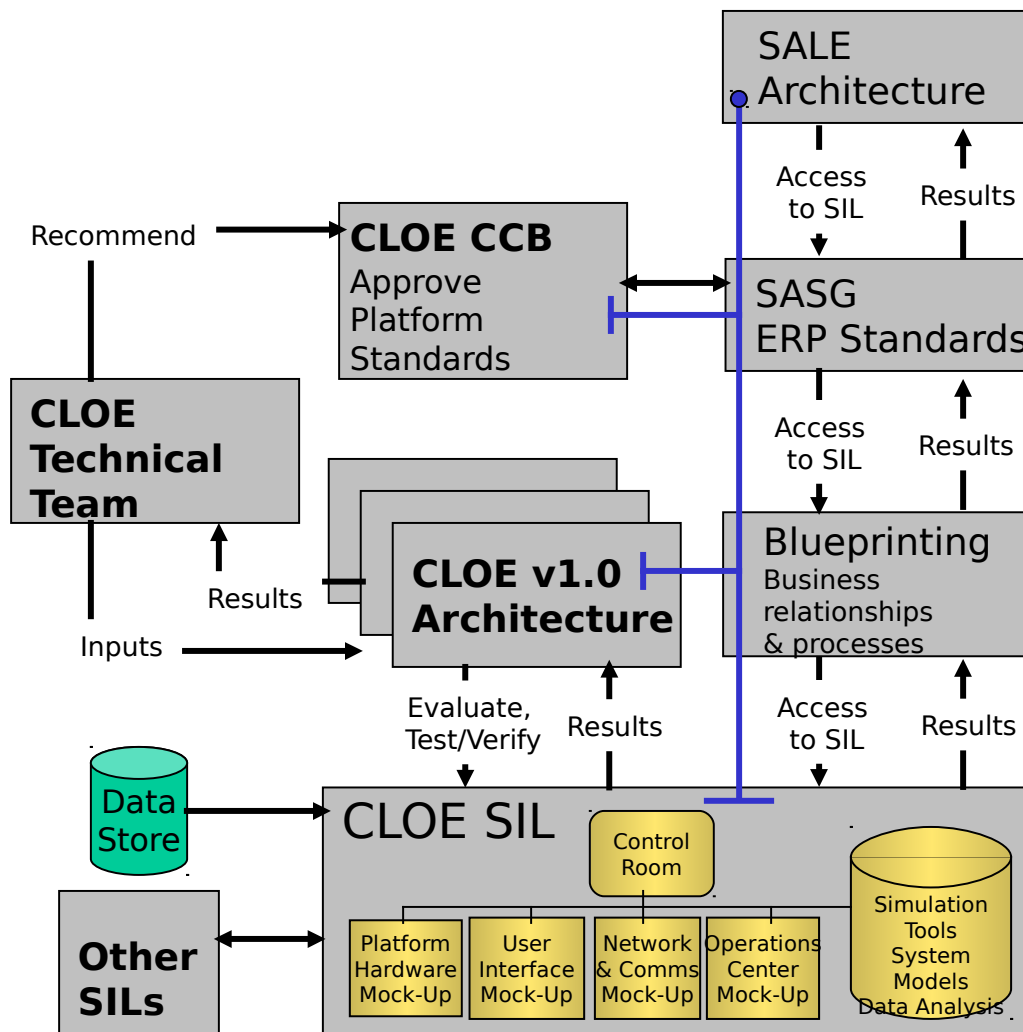
PM INVOLVEMENT AT ALL STAGES

Matrix Support to the PMs

Sustaining The Transforming Army... Transforming the Sustaining Army



CLOE and Logistics Enterprise Integration



- **Establish Management & Technical Working Relationship Between LTA and AMC DALEIO**

- **OBJECTIVE: Determine Business Relationships and Processes Required for Blueprinting Based on Newly Available Platform Data**



Funding Requirements

FY 04/05

- **3.8M FY 04 UFR**
- **4.0M FY 05 UFR**
 - **Synchronize and Coordinate CLOE Requirements**
 - **SBCT POE Demonstration**
 - **CLOE Architecture Version 2.0**
 - **CLOE Exercise**
 - **Exercise CONOPs**
 - **Exercise Plan**
 - **Exercise Software Development**
 - **Stand-up CLOE SIL**
 - **SIL Operation**
 - **Business Process Redesign**
 - **Technology and Doctrine Gaps and Redundancies Analysis**
 - **Modeling and Simulation**
 - **Demonstration/Exercise Hardware Procurement**
 - **Standards and Specifications Implementation**
 - **Systems Integration**



Funding Requirements

POM 06-11

- \$4M Annual CLOE Operations
- +

CLOE SIL (RDT&E)

- Evaluate
 - New Technologies
 - New Concepts
 - New Standards
- Synchronize
 - Doctrine/Policy
 - Operational Arch.
- Integration
 - Commonality
 - Interoperability
 - Technical Test
- Develop System Arch.

CLOE Implement.

- Procure
 - Hardware
- Software Development
 - Operational
 - Capable
 - Documentation
- Test
 - Technical Testing
 - OT - Exercise
 - ATEC
- Fielding
 - Installation
- Training
 - Training Base
 - NETT

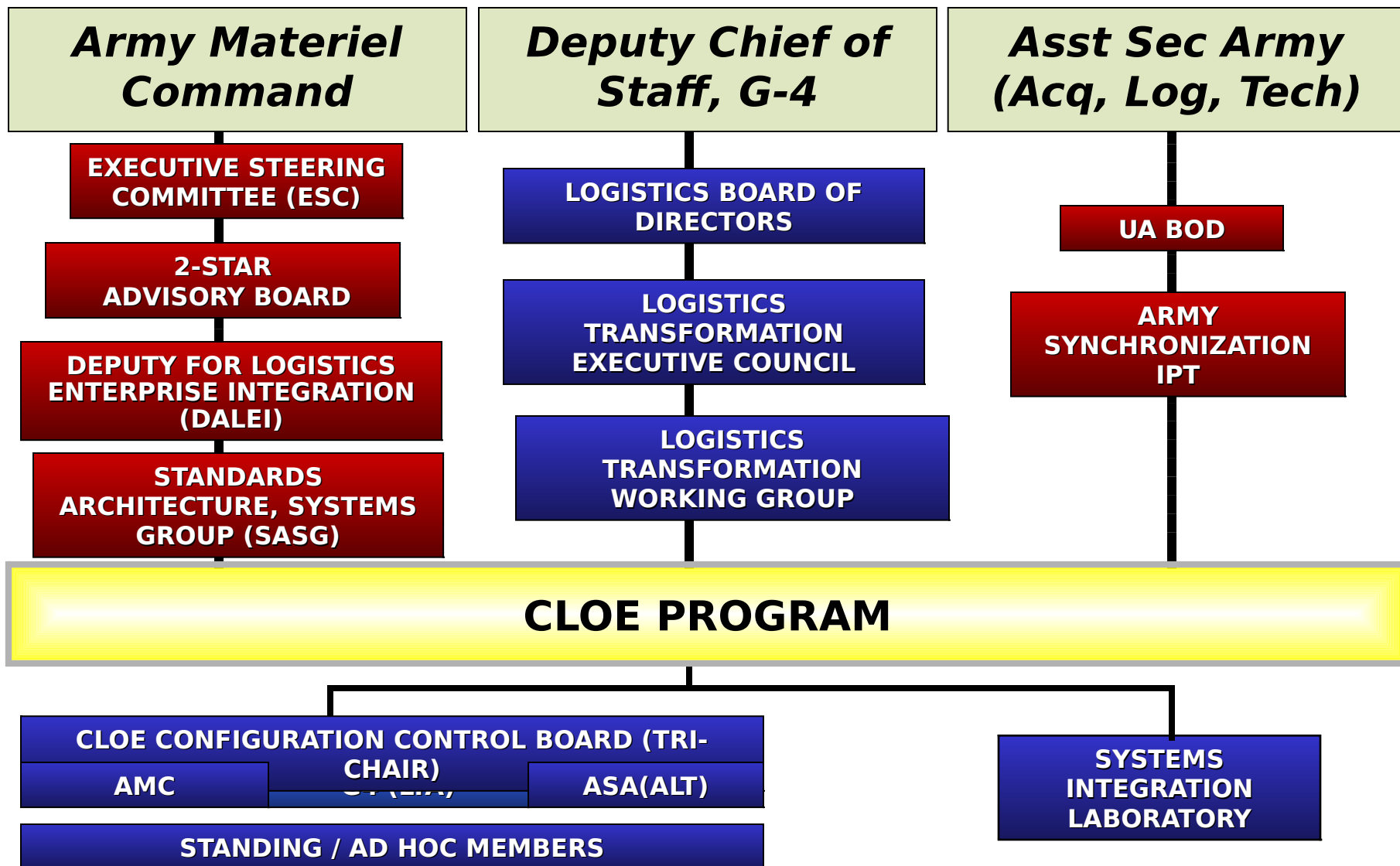
CLOE Sustainment

- Life Cycle MGT
 - Sustain Hardware
 - Sustain Software
 - Sustain System
 - Architecture
- Configuration MGT
 - CMP
 - CCB
 - System Architecture

- Crosses Multiple PEGs
- Needs Separate MDEP



CLOE Governance





Recommendations

- **Approve and Fund CLOE Strategy in FY 04/05**
- **Approve CLOE As a Separate MDEP, POM 06-11**
 - **Source From Multiple PEGs**
 - **Direct PA&E to Lead Financial Analysis**
- **Approve Governance Recommendation**
- **Direct Us to Schedule Workshop to *Collectively* Develop/Approve an Execution Plan**
 - **HQDA Elements**
 - **PEOs/PMs**
 - **MACOMs**